

REMARKS

Applicants have carefully reviewed this Application in light of the Final Office Action mailed November 12, 2003 (Paper No. 15). Claims 1-6, 15 and 25 were previously canceled without prejudice or disclaimer. Claims 7-14, 16-24 and 26-30 are pending in this Application. Claims 7-14, 16-24, and 26-30 stand rejected under 35 U.S.C. §112, first paragraph and 35 U.S.C. §103, and Claims 8 and 18 stand rejected under 35 U.S.C. §112, second paragraph. Applicants have amended Claims 7-9, 12, 17-19, 21, 26 and 29 to further define various features of Applicants' invention. Applicants respectfully request reconsideration and favorable action in this case.

Rejections under 35 U.S.C. § 112

Claims 7-14, 16-24, and 26-30 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants have amended Claims 7, 17 and 26 submit that Claims 7-14, 16-24 and 26-30 now meet the requirements of section 112, first paragraph. Applicants respectfully request that the Examiner reconsider and withdraw the rejections to Claims 7-14, 16-24 and 26-30.

Claims 8 and 18 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended Claims 8 and 18 and submit that Claims 8 and 18 now meet the requirements of section 112, second paragraph. As such, Applicants respectfully request that the Examiner reconsider and withdraw the rejections to Claims 8 and 18.

Rejections under 35 U.S.C. § 103

Claims 7-14, 16-24, and 26-30 stand rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,742,386 issued to Noriyuki Nose et al. ("Nose") in view of U.S. Patent No. 4,657,805 issued to Yasunori Fukumitsu et al. ("Fukumitsu").

Nose discloses an apparatus for detecting foreign matter on a substrate. The substrate may be a pellicle formed of nitrocellulose. (Col. 1, Lines 44-47). The apparatus monitors the transmittance or the reflectivity of the pellicle and corrects the amount of light projected onto a surface based on the monitored value. (Col. 2, Lines 47-53). Corrective measures are performed by varying the intensity of the light beam. (Col. 5, Lines 38-39).

Fukumitsu discloses a dust cover comprising a film having a layer of a specific fluoropolymer.

Claim 7 recites a pellicle comprising a “thin film formed to cooperate with a photomask including an opening and facilitate projection of an image including spatial information associated with the opening from the photomask onto a surface, the spatial information operable to increase resolution of the image.”

Claim 17 recites a photolithography system comprising “an amorphous fluoropolymer thin film operable to transmit approximately ninety-nine percent (99%) of off-axis light at an exposure wavelength such that an image of the opening projected onto a surface by the photomask includes spatial information contained in the off-axis light, the spatial information operable to increase resolution of the image.”

Claim 26 recites a method for performing photolithography comprising the step of “projecting the radiant energy through the opening in the photomask to form an image on a surface, the thin film operable to facilitate projection of spatial information associated with the opening and increase resolution of the image.”

Applicants respectfully submit that the cited references fail to disclose every element of Applicants' invention as amended. Further, there is no motivation, teaching, or suggestion to combine Nose and Fukumitsu. Nose and Fukumitsu, alone or in combination, fail to teach at least a “thin film formed to cooperate with a photomask including an opening and facilitate projection of an image including spatial information associated with the opening from the photomask onto a surface, the spatial information operable to increase resolution of the image,” as recited by amended Claim 7. Additionally, Nose or Fukumitsu fail to teach a photolithography system including “an amorphous fluoropolymer thin film operable to transmit approximately ninety-nine percent (99%) of off-axis light at an exposure wavelength such that an image of the opening projected onto a surface by the photomask includes spatial information contained in the off-axis light, the spatial information operable to increase

resolution of the image,” as recited by amended Claim 17. Further, Nose or Fukumitsu fail to teach or suggest “projecting the radiant energy through the opening in the photomask to form an image on a surface, the thin film operable to facilitate projection of spatial information associated with the opening and increase resolution of the image,” as recited by amended Claim 26.

The Examiner states that “[i]t is implicitly true that the photomask has ‘opening’ and has spatial information, i.e. physical pattern, that is transferred to the wafer to manufacture the semiconductor device.” (Paper No. 15, Page 5). The Examiner’s rejection, however, fails because Nose does not disclose the recited elements as necessarily present. Nose fails to teach or suggest, either explicitly or implicitly, that a thin film optimized for transmission of off-axis light facilitates projection of an image including spatial information from a photomask to a surface, which increase the resolution of the image. However, only by reading Applicants’ Specification can a person of skill in the art determine how the spatial information contained in high order peaks of a Fraunhofer pattern is captured to create a high resolution image of the opening on the photomask. (Specification, Pages 14-15). It is improper to use Applicants’ Specification as evidence that a claim element is well known in the art. The cited references, therefore, fail to disclose the recited limitations and cannot render obvious Claims 7, 17 and 26.

Given that Claims 8-14 and 16 depend from Claim 7, Claims 18-24 depend from Claim 17, and Claims 27-30 depend from Claim 26, Applicants respectfully submit that Claims 8-14, 16, 18-24 and 27-30 are allowable. As such, Applicants respectfully request that the Examiner withdraw the rejections and allow Claims 7-14, 17-24 and 26-30.

CONCLUSION

Applicants appreciate the Examiner's careful review of the application. Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. For the foregoing reasons, Applicants respectfully request reconsideration of the rejections and full allowance of Claims 7-14, 16-24, and 26-30, as amended.

Applicants enclose a Petition for Extension of Time along with a check in the amount of \$110.00 for the filing fee. Applicants enclose a check in the amount of \$770.00 for the RCE fee required under 37 C.F.R. 1.17(e). Applicants believe no additional fees are due at this time, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 50-2148 of Baker Botts L.L.P. in order to effectuate this filing.

If there are any matters concerning this application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2581.

Respectfully submitted,

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